

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 73 and 91, and amend claims 70, 74, 77-84, 90, and 92-97 as follows:

Listing of Claims:

1-69. (Canceled)

70. (Currently Amended) A planarizing apparatus for planarization of microelectronic-device substrate assemblies, comprising:

a table for carrying a polishing pad;

a carrier assembly having a carrier head configured to hold a substrate assembly, the carrier head being movable to press the substrate assembly against the polishing pad, and at least one of the carrier head and the table being translatable with respect to the other to translate the substrate assembly across the polishing pad;

a slurry manufacturing assembly including:

a first supply of a first solution that has not been used to planarize a microelectronic substrate, the first solution having a plurality of first abrasive particles;

a first feed line in fluid communication with the first supply for containing a flow of the first solution;

a second supply of a second solution that has not been used to planarize a microelectronic substrate, the second solution having a plurality of second abrasive particles, the second solution being separate from the first solution;

a second feed line in fluid communication with the second supply for containing a separate flow of a second solution having a plurality of second abrasive particles;

a first removal unit coupled to the first feed line, the first removal unit configured to selectively remove a first type of selected abrasive particles from the first abrasive particles; and

a second removal unit coupled to the second feed line, the second removal unit configured to selectively remove a second type of selected abrasive particles from the second abrasive particles; and

a combination feed line in fluid communication with the first removal unit to receive a filtered flow of the first solution from the first removal unit, the combination feed line further being in fluid communication with the second removal unit feed line to receive a flow of the second solution from the second removal unit feed line that is separate from the filtered flow of the first solution; and

at least one of a mixer configured to mix a combined flow of the first and second solutions received from the combination feed line, the mixer including a conduit through which the combined flow is passed to form a turbulent zone; and

a slurry dispenser coupled to ~~the combination line~~ at least one of the mixer and conduit to dispense an abrasive slurry comprising the first and second solutions, the dispenser being positionable over the table to dispense the slurry from the combination line onto the planarizing pad.

71. (Original) The planarizing apparatus of claim 70 wherein the first removal unit comprises a first filtration unit.

72. (Previously Presented) The planarizing apparatus of claim 71 wherein the first filtration unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 1.0  $\mu\text{m}$ .

73. (Canceled)

74. (Currently Amended) The planarizing apparatus of claim ~~73~~ 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ ; and

the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.05  $\mu\text{m}$ .

75. (Previously Presented) The planarizing apparatus of claim 70 wherein the first removal unit comprises a first filtration unit configured to remove abrasive particles having a particle size greater than approximately 0.8  $\mu\text{m}$ .

76. (Previously Presented) The planarizing apparatus of claim 70 wherein the first removal unit comprises a first filtration unit configured to remove abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ .

77. (Currently Amended) The planarizing apparatus of claim ~~73~~ 70 wherein the second removal unit comprises a first filtration unit configured to remove abrasive particles having a particle size greater than approximately 0.15  $\mu\text{m}$ .

78. (Currently Amended) The planarizing apparatus of claim ~~73~~ 70 wherein the second removal unit comprises a first filtration unit configured to remove abrasive particles having a particle size greater than approximately 0.05  $\mu\text{m}$ .

79. (Currently Amended) The planarizing apparatus of claim ~~74~~ 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 1.0  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

80. (Currently Amended) The planarizing apparatus of claim ~~74~~ 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 1.0  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

81. (Currently Amended) The planarizing apparatus of claim 74 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.8  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

82. (Currently Amended) The planarizing apparatus of claim 74 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.8  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

83. (Currently Amended) The planarizing apparatus of claim 74 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

84. (Currently Amended) The planarizing apparatus of claim 74 70 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

85. (Previously Presented) The planarizing apparatus of claim 70 further comprising a mixing unit configured to mix the combined flow of the first and second solutions.

86. (Previously Presented) The planarizing apparatus of claim 70 further comprising a conduit through which the combined flow of the first and second solutions is passed to provide a turbulent zone for mixing the combined flow.

87. (Previously Presented) The planarizing apparatus of claim 70 further comprising a volume control unit configured to mix 1-99% by volume of the first filtered solution with 1-99% by volume of the second solution.

88. (Previously Presented) The planarizing apparatus of claim 87 wherein the volume control unit is configured to alter a mix ratio of the first filtered solution and the second solution during a single polishing cycle.

89. (Previously Presented) The planarizing apparatus of claim 88 wherein the volume control unit is configured to change from a first mix ratio of the first filtered solution and the second solution to a second mix ratio of the first filtered solution and the second solution.

90. (Currently Amended) A planarizing apparatus for planarization of microelectronic-device substrate assemblies, comprising:

a table for carrying a polishing pad;

a carrier assembly having a carrier head configured to hold a substrate assembly, the carrier head being movable to press the substrate assembly against the polishing pad, and at least one of the carrier head and the table being translatable with respect to the other to translate the substrate assembly across the polishing pad;

a slurry manufacturing assembly including:

a first supply of a first solution that has not been used to planarize a microelectronic substrate, the first solution having a plurality of first abrasive particles;

a first feed line in fluid communication with the first supply for containing a flow of the first solution;

a second supply of a second solution that has not been used to planarize a microelectronic substrate, the second solution having a plurality of second abrasive particles, the second solution being separate from the first solution;

a second feed line in fluid communication with the second supply for containing a separate flow of the second solution;

a first removal unit coupled to the first feed line, the first removal unit configured to selectively remove a first type of selected abrasive particles from the first abrasive particles; and

a second removal unit coupled to the second feed line, the second removal unit configured to selectively remove a second type of selected abrasive particles from the second abrasive particles; and

a combination feed line in fluid communication with the first removal unit to receive a filtered flow of the first solution from the first removal unit, the combination feed line further being in fluid communication with the second removal unit feed line to receive a flow of the second solution from the second removal unit feed line that is separate from the filtered flow of the first solution;

at least one of a mixer configured to mix a combined flow of the first and second solutions received from the combination feed line and a conduit through which the combined flow is passed to form a turbulent zone; and

a slurry dispenser coupled to ~~the combination line~~ at lease one of the mixer and the conduit to dispense the combined flow, the dispenser being positionable over the table to dispense the slurry from the combination line onto the planarizing pad.

91. (Canceled)

92. (Currently Amended) The planarizing apparatus of claim ~~91~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

93. (Currently Amended) The planarizing apparatus of claim ~~91~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 1.0  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

94. (Currently Amended) The planarizing apparatus of claim ~~92~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 1.0  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

95. (Currently Amended) The planarizing apparatus of claim ~~92~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.8  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.05  $\mu\text{m}$ .

96. (Currently Amended) The planarizing apparatus of claim ~~92~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having a particle size greater than approximately 0.8  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

97. (Currently Amended) The planarizing apparatus of claim ~~92~~ 90 wherein:  
the first ~~filtration~~ removal unit comprises a filter abrasive particles having a particle size greater than approximately 0.3  $\mu\text{m}$ ; and  
the second ~~filtration~~ removal unit comprises a filter configured to remove abrasive particles having particle size greater than approximately 0.15  $\mu\text{m}$ .

98. (Previously Presented) The planarizing apparatus of claim 90 further comprising a volume control unit configured to mix 1-99% by volume of the first filtered solution with 1-99% by volume of the second solution.

99. (Previously Presented) The planarizing apparatus of claim 98 wherein the volume control unit is configured to alter a mix ratio of the first filtered solution and the second solution during a single polishing cycle.

100. (Previously Presented) The planarizing apparatus of claim 99 wherein the volume control unit is configured to change from a first mix ratio of the first filtered solution and the second solution to a second mix ratio of the first filtered solution and the second solution.